

## Professor in Thermal Energy

DTU Mechanical Engineering at Technical University of Denmark invites applications for a position as Professor in Thermal Energy.

DTU Mechanical Engineering is contributing to research, innovation, and education within the following scientific areas: Structural and solid mechanics, fluid and hydrodynamics, applied thermodynamics, manufacturing technology, engineering design and product development, materials- and surface engineering.

The professor will be affiliated to the Thermal Energy Section which is one out of six sections in the department.

### Responsibilities and tasks

Research focus has been on optimization of thermal energy systems with special focus on power production, refrigeration, heat pumps, internal combustion engines, fuels cell systems, and utilization of biomass for energy. The new professor will have a leading role in the development of research and innovation activities in the Section.

Faculty in the Thermal Energy section has a considerable responsibility for teaching students engineering thermodynamics and energy conversion, and the Section attracts students from different study lines as Mechanical Engineering and Sustainable Energy. The new professor will have a major responsibility for the teaching activities in the Section, and the successful candidate will be involved in teaching at the BSc, MSc, and PhD levels.

The successful candidate is expected to have extensive relations to other relevant (inter)national research groups in academia and industry. The new professor is also required to establish relations to other relevant research groups at DTU working with thermal energy.

Experience with management of a large research group (+30 researchers) is essential, and the candidates are expected to have experience with attracting external funding for research and innovation.

Furthermore, the successful candidate must contribute to a continuous expansion of national and international networking activities.

### Qualifications

The new professor should have documented experience from research and teaching in applied thermodynamics and thermal energy.

Candidates are expected to be able to demonstrate notable achievements within research in several of the following areas:

- thermodynamic analyses
- heat pumps and integration of heat pumps in energy systems
- industrial heat pumps
- thermo-mechanical storage of electric energy
- numerical modelling of energy systems and components
- integration of intermittent, renewable energy production
- components for power, heat and mass transfer in future energy systems

Furthermore, the candidates must have the following qualifications:

- A high level of original scientific production at international level that has contributed to the further development of the area.
- Documented and successful teaching experience at different levels within the University's study programmes, including and, in particular, at PhD level.
- Documented experience in at least one of the following two fields:
  - Research management, including handling management tasks in national or international projects, research programmes, congresses, etc.
  - Innovation, including building up patent areas, applying research results in a commercial context, etc.

### Assessment

In the assessment of the candidates, consideration will be given to

- the ability to teach
- scientific production at international level, research potential and ability to lead and develop a research team
- the ability to promote and utilize research results
- experience with innovation activities
- an all-round experience basis, including international experience
- the ability to contribute to the development of internal and external cooperation
- track record in attracting funding to the research area
- visions within the research area

### Salary and terms of employment

The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union.

### Further information

Further information may be obtained from Head of Department Professor Hans Nørgaard Hansen, tel.: +45 4525 4816.

You can read more about Department of Mechanical Engineering on [www.mek.dtu.dk](http://www.mek.dtu.dk).

### Application procedure:

Please submit your online application no later than **XXX 2017**. Apply online at [www.career.dtu.dk](http://www.career.dtu.dk).

Applications must be submitted as **one pdf file** containing all materials to be given consideration. To apply, please open the link 'Apply online', fill in the online application form, and attach **all your materials in English in one pdf file**. The file must include:

- Application (cover letter) addressed to the President
- A plan for future research
- CV
- Documentation for teaching experience (e.g. in the form of a teaching portfolio)
- List of publications indicating scientific highlights
- H-index, and ORCID (see e.g. <http://orcid.org/>)
- Diploma (MSc/PhD)

All interested candidates irrespective of age, gender, disability, race, religion, or ethnic background are encouraged to apply.